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CLAIMS

What is claimed is:

1. A remote controlled air conditioning nozzle, comprising:
a housing;
5 an air nozzle, said air nozzle being spherically connected into said housing, said air nozzle having an air passageway with an input end and an output end, said input end having an outer surface, conditioned air enters said input end and exits said output end;
said air nozzle having a means for damping the volume of air output;
10 at least one electric motor being provided, a means for spherically changing the output direction of said air nozzle being provided, said air nozzle having a means for changing the volume of air output, said means for spherically changing the output direction of the air nozzle being propelled by at least one electric motor, said means for changing the volume of air output also being propelled by said at least
15 one electric motor; and
a remote control being provided, said remote control directs said means for spherically changing the output direction of said air nozzle and said means for changing the volume of air output by said air nozzle.
- 20 2. The remote controlled air-conditioning nozzle of claim 1, wherein said remote control being located near the seat occupant.
3. The remote controlled air-conditioning nozzle of claim 1 further comprising an air supply line, said air supply line brings air into said input end of said air nozzle.

4. The remote controlled air conditioning nozzle of claim 1, wherein said outer surface of said input end of said air nozzle having a spherical contour.
- 5 5. The remote controlled air conditioning nozzle of claim 1, wherein said means for spherically changing the output direction of said air nozzle further comprising at least one pivot hinge, said at least one pivot hinge having a hinge pin and a hinge pin receiver, said hinge pin being disposed on said outer surface of said input end of said air nozzle, said hinge pin receiver being disposed on said housing, said hinge pin being installed into said
- 10 hinge pin receiver such that said air nozzle can pivot on said at lease one pivot hinge.
6. The remote controlled air conditioning nozzle of claim 5, wherein said housing having a sprocket, said sprocket having a circular outer perimeter, gear teeth being evenly spaced around said circular outer perimeter, said sprocket having a circular inner perimeter, said
- 15 sprocket having an upper surface and a lower surface, said sprocket having at least one hinge pin receiver located on said circular inner perimeter, said air nozzle being located within said sprocket such that at least one hinge pin being attached to said at least one hinge pin receiver, said housing having a lower lip, said sprocket resting on ball bearings sandwiched between said lower surface and said lower lip of said housing, said sprocket
- 20 being rotatable on said ball bearings, said sprocket rotating about a vertical axis running through the center of said sprocket, said sprocket receiving rotational impetuous from said at least one electric motor.
7. The remote controlled air conditioning nozzle of claim 6, further comprising said outer

surface of said input end of said air nozzle having a first hinge pin and a second hinge pin, said sprocket having a first hinge pin receiver and a second hinge pin receiver, said second hinge pin receiver being vertically offset from said first hinge pin receiver.

5 8. The remote controlled air conditioning nozzle of claim 1, wherein said means for spherically changing the output direction of said air nozzle further comprising at least one groove pin being disposed on said outer surface of said input end of said air nozzle, at least one groove being disposed on said housing, said air nozzle being positioned within said housing such that said at least one groove pin slideably fits within said at least
10 one groove.

9. The remote controlled air conditioning nozzle of claim 8, wherein said at least one groove being sinusoidal shaped.

15 10. The remote controlled air conditioning nozzle of claim 8, wherein said at least one groove pin having a biasing means to push it into said at least one groove.

11. The remote controlled air conditioning nozzle of claim 10, wherein said biasing means being a spring.

20 12. The remote controlled air conditioning nozzle of claim 1, wherein said means for changing the volume of air output by said air nozzle includes a damper flap, said damper flap having at least one rotation hinge, said damper flap being sized and shaped to rotate on said at least one rotation hinge to change the volume of air entering said air nozzle.

13. The remote controlled air conditioning nozzle of claim 1, wherein said means for
spherically changing the output direction of said air nozzle further comprising a bushing
with a top surface and a central receiving hole, a coupler being provided, said coupler
5 having a perimeter, a top surface, a bottom surface and a central rotation shaft, said
perimeter of said coupler having gear teeth evenly disposed, said central rotation shaft
having a centerline, a drive shaft being attached to an engager, said drive shaft having a
centerline, said engager having a T shape, said central rotation shaft being installed
through a biasing means into said central receiving hole, said biasing means pushes
10 against said bottom surface of said coupler and said top surface of said bushing, said
coupler having at least one ramp with an end notch concentrically located on said top
surface near said perimeter, said engager being shaped, sized and located such that said
centerline of said drive shaft being co-linear to said centerline of said central rotation
shaft and said engager being in contact with said at least one ramp, said at least one ramp
15 and end notch being disposed such that when said engager being rotated in a first
direction, said engager locks against said end notch and rotates said coupler, said gear
teeth of said coupler engaging said gear teeth of said sprocket to impart rotation into said
sprocket, rotation of said sprocket causes said air nozzle to rotate on said first hinge pin
and said second hinge pin and slide said at least one groove pin along said at least one
20 groove spherically rotating said air nozzle, when said engager being rotated in a second
direction, said engager rides up said at least one ramp pushing said coupler against said
biasing means without locking against said end notch, no rotation being imparted into
said coupler.

14. The remote controlled air conditioning nozzle of claim 11, said means for changing the volume of air output by said air nozzle further comprising a bushing with a top surface and a central receiving hole, a coupler being provided, said coupler having a perimeter, a top surface, a bottom surface and a central rotation shaft, said perimeter of said coupler having evenly disposed gear teeth, a drive shaft being attached to an engager, said drive shaft having a centerline, said engager having a T shape, said central rotation shaft being installed through said biasing means and into and through said central receiving hole, said biasing means pushes against said bottom surface of said coupler and against said top surface of said bushing, said coupler having at least one ramp with an end notch concentrically located on said top surface near said perimeter, said engager being shaped, sized and located such that said centerline of said drive shaft being co-linear to said centerline of said central rotation shaft and said engager being in contact with said at least one ramp, said at least one ramp and end notch being disposed such that when said engager being rotated in a second direction, said engager locks against said end notch and rotates said coupler, a flexible shaft being connected to the end of the said central rotation shaft sticking out through said central receiving hole of said bushing, said flexible shaft being connected concentrically to said at least one rotation pivot hinge of said damper flap, rotation of said central rotation shaft results in a change in the volume of air output by said air nozzle, when said engager being rotated in the opposite direction, said engager pushes against said at least one ramp pushing said coupler against said biasing means without locking said engager against said end notch, no rotation being imparted into said coupler.

15. A remote controlled air conditioning nozzle, comprising:

a housing;

an air nozzle, said air nozzle having a first pivotal connection to said housing, said first
pivotal connection having a first pivotal axis, said air nozzle having a second
pivotal connection to said housing, said second pivotal connection having a
5 second pivotal axis, said second pivotal axis being perpendicular to said first
pivotal axis, said air nozzle having an air passageway with an input end and an
output end, said input end having an outer surface, conditioned air enters said
input end and exits said output end;

a first motor being provided;

10 said first motor being disposed to propel a first means for pivoting said air nozzle about
said first pivotal connection;

a second motor being provided;

said second motor being disposed to propel a second means for pivoting said air nozzle
about said second pivotal connection;

15 a third motor being provided;

said third motor being disposed to propel a means for changing said volume of air output
by said air nozzle; and

a remote control being provided, said remote control directs said first means for pivoting
said air nozzle about said first pivotal connection, said second means for pivoting
20 said air nozzle about said second pivotal connection and said changing of said
volume of air output by said air nozzle.

16. The remote controlled air conditioning nozzle of claim 15, wherein said means for
changing the volume of air output having a worm drive gear attached to said third motor,

worm receiver gear being disposed in relation to said damping device such that when driven by said worm gear, the volume of air output by said air nozzle changes.

17. The remote controlled air conditioning nozzle of claim 15, wherein said air nozzle having
5 a spherical outer surface region, said spherical outer surface region being cupped in a spherical socket in said housing thus forming said spherically pivotable connection.

18. The remote controlled air conditioning nozzle of claim 15, wherein a swivel plate being
sized, shaped and attached to said outer surface of said air nozzle such that said air nozzle
10 being sandwiched between said swivel plate and said spherical socket, said swivel plate
having a first corner, a second corner and a third corner.

19. The remote controlled air conditioning nozzle of claim 18, wherein;
said first motor and said first means for pivoting said air nozzle about said first pivotal
15 connection further comprises said first motor being connected by a gear means to said first corner of said swivel plate;
said second motor and said second means for pivoting said air nozzle about said second pivotal connection further comprises said second motor being connected by a gear means to said second corner of said swivel plate;
20 said third corner being attached by a biasing means to said holding fixture; and
said first motor and or said second motor being directed by signals sent by said remote control to pivot said swivel plate while said third corner of said swivel plate being fixed by said biasing means resulting in said air nozzle being pivoted while holding said spherical outer surface region into the cupping said spherical socket.

20. The remote controlled air conditioning nozzle of claim 18, wherein said signals sent by said remote control being transmitted from a central electronic control board.

5 21. The remote controlled air conditioning nozzle of claim 18, wherein said swivel plate being orientated perpendicular to the direction of the output air.

22. The remote controlled air conditioning nozzle of claim 18, wherein said swivel plate having a planar shape.

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23. The remote controlled air conditioning nozzle of claim 18, wherein said biasing means being a spring.

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